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The Ohio State University College of Agriculture ACCESS System Nutrient Determination Program

By

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INTRODUCTION

The Nutrient Determination Program is used to determine nutrient content of a diet from values stored on a data file. While there are several optional calculations that may be run under the Nutrient Determination Program, this paper will restrict itself to the basic nutrient determination of a diet.

The Nutrient Determination Program is especially useful in situations where a nutrient deficiency is suspected in the feeding program. The diet formula is fed into the computer and the report gives the nutrient values of the diet.

These values can then be compared to required nutrient values for that species. If a nutrient deficiency is found, the Feed Blend Program can be used to determine a well balanced diet.

NUTRIENT DETERMINATION - PROBLEM SOLVING

To use the Nutrient Determination Program, one must first Log In. Next one must call for the Maddy Associates System. This is done by responding to the minus (-) by typing Maddy, followed by a carriage return (MADDY).

-MADDY

To enter the Nutrient Determination Program, it is necessary to type Nutrient Determination (NUTDET) followed by a carriage return, in response to the call for program (PROG:).

PROG: NUTNET

After one has entered the Nutrient Determination Program, he must then enter his data or input. The first input required is an identification line of forty-eight characters or less. The computer will request an identification (ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.),

ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.

to which one must enter an identification (example NAME DATE) followed by a carriage return.

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The next requested data is a file number. The file numbers range from 1 to 5. In this example, 5 is for steer and dairy diets. When the request for the data file number (ENTER DATA FILE NUMBER) is issued, one should respond with a minus sign and the desired data file number (example -5) followed by a carriage return.

ENTER DATA FILE NUMBER -5

The next data item is the amount of the mix one wishes to make. This entry must be made in pounds. Many people wish to work in tons, so common entries include 2000, 4000, 6000, etc. The computer will call for the amount of the batch (BATCH SIZE =). One should enter how many pounds of diet he wishes to mix at one time (example 2000).

BATCH SIZE = 2000

Before the computer can determine the nutrient content of a diet, it must first be given the diet. The diet ingredients are identified by the number they have on the data file. Ingredients not on the data file can be identified by putting a minus before their identification numbers. The amount of each ingredient in the diet may be given for any uniform size sample. The most common used are the amount in a daily ration or the amount in the total batch. The price can also be included and is useful for some of the optional calculations. The computer will ask for the diet (ENTER COMPOSITION AS INGRED. #, AMOUNT, COST).

ENTER COMPOSITION AS INGRED.#, AMOUNT, COST.

The diet is entered by putting the ingredient number, a comma, the amount of the ingredient, a comma, and the price per hundred weight of the ingredient (example 1,1.,1.75). Each entry is followed by a carriage return.

1,1.,1.75

4,5.14362,.6

6,17.46553,3.5

13,.08801,6.

14,.06039,1.5

15,.07431,5.5

16,.1,2.

17,.1,25.

-1,1.,4.75

To terminate the entries, put an extra carriage return after the last entry.

The computer will then give the total weight of the sample used to enter the diet (SUM OF AMT. ENTRIES = 23.03186).

One then has the option of receiving the nutrient values in the reports based on the weight of the sample or based on a hundred pounds of diet. If the sample is a daily ration, it may be advantageous to obtain the reports based on the sample weight for direct comparison to daily requirements. In other cases, it may be advantageous to obtain the reports based on a hundred pounds. If one wants the reports based on a hundred pounds, he should request that the sample be normalized. The computer will ask if you wish to normalize or not (NORMALIZE?). If one wishes to normalize, he should reply yes (YES) followed by a carriage return.

SUM OF AMT. ENTRIES = 23.03186 NORMALIZE? YES

If not, he should reply no (NO) followed by a carriage return.

SUM OF AMT. ENTRIES = 23.03186 NORMALIZE? NO

Another option of this program is the evaluation of nutrients not already on the data file. This can be done when the computer asks if there are any new rows. The computer will ask if there are any nutrients to be added (NEW ROWS?). If one does not want to add any

additional nutrients that are not in the data file, he should reply no (NO) followed by a carriage return.

NEW ROWS? NO

If he does, he should reply yes (YES) followed by a carriage return.

NEW ROWS? YES

If one indicates that he would like to evaluate for some new nutrients, the computer will ask for the name of the first new nutrient (ENTER NAME OF NUTRIENT)

ENTER NAME OF NUTRIENT

to which one should reply with the name of the new nutrient (example SODIUM) followed by a carriage return.

SODIUM

The values of the nutrient for each ingredient can be entered by giving the number of the ingredient and the amount of the nutrient in the ingredient. The computer will ask for the values of the new nutrient (example ENTER COMPOSITION AS INGRED.#, CONTENT FOR ROW 12).

ENTER COMPOSITION AS INGRED.#, CONTENT FOR ROW 12

One should enter the values as the ingredient number, a comma, and the value (example 16,.3934). A carriage return should be used after each entry.

1,.00000

4,.00000

6,.000005

13,.00000

14,.00000

15,.00000

16,.3934

17,.00000

-1,.01148

One should give an extra carriage return after the last value. An extra carriage return is also used after the last new nutrient.

Since one of the ingredients, -1, is not on the data file, the computer will request the name of the new ingredient by use of its numeral identification (ENTER TITLE OF NEW INGREDIENT -1)

ENTER TITLE OF NEW INGREDIENT -1

to which one should type the name of the new ingredient (example OHPRO) followed by a carriage return.

OHPRO

Before the computer can work with the new ingredient, it must know the nutrient content of this ingredient. The nutrients are entered by the identification number the nutrient has on the data file. The amount of the nutrient is based on a pound sample of the ingredient. The computer will ask for the nutrient values of the ingredient (ENTER COMPOSITION AS NUTRIENT#,CONTENT).

ENTER COMPOSITION AS NUTRIENT#, CONTENT

The nutrient values should be entered by the nutrient number, a comma, and the content (example 1,1.) followed by a carriage return. Use a carriage return after each entry.

1,1.

2,.6

3,.41

5,.1

6,.015

7,.08

8,.003

9,.007

10,.9

11,.9

Use an extra carriage return after the last nutrient value.

The computer will also give one the opportunity to change any of the nutrient values of any of the ingredients already on the data file. The computer will ask if there are any changes in values (ANY COEFFICIENT CHANGES?). If one does not wish to change any of the values, he should reply no (NO) followed by a carriage return.

ANY COEFFICIENT CHANGES? NO

If he does, he should reply yes (YES) followed by a carriage return.

ANY COEFFICIENT CHANGES? YES

If the reply yes is made, the computer needs to know the new values. These are entered by using the identification number of the ingredient, the identification number of the nutrient, and the new value for the nutrient. The computer will request the new values (ENTER CHANGE AS INGRED.#, NUTR.#, NEW VALUE).

ENTER CHANGE AS INGRED.#, NUTR.#, NEW VALUE

to which one should reply with the ingredient number, a comma, the nutrient number, a comma, and the new value (example 1,2,.25). Each entry should be followed by a linefeed, a carriage return, and a rubout.

1,1,1.

1,2,.25

1,3,.17

1,4,.125

1,6,.0275

1,7,.26

1,8,.0135

1,9,.002

1,10,1.

1,11,1.

One should give an extra carriage return after the last change.

The computer gives back two reports. The first report gives the name of the ingredients in the first column. The second column gives the amount of each ingredient in the sample and the total weight of the sample. The third column gives the cost per hundredweight of each ingredient. In the fourth column, the cost of the amount in the sample of each ingredient and the total cost of the sample is given. The fifth and final column gives the amount of each ingredient in the batch and the amount in the entire batch. This sample has not been normalized.

* * * DIET COMPOSITION AND COST * * *

INGREDIENT NAME	PERCENT IN DIET	UNIT COST	COST CONTR.	BATCH AMT.
ALFALFA	1.0000	1.75	.02	20.00
CORN SILAGE	5.1436	.60	.03	102.87
CORN & COBS	15.4655	1.50	.23	309.31
UREA	.0880	6.00	.01	1.76
CALCIUM CARBONATE	.0604	1.50	.00	1.21
DEFLOR PHOSPHATE	.0743	5.50	.00	1.49
SALT	.1000	2.00	.00	2.00
FIXED INGREDIENTS	.1000	25.00	.02	2.00
OHPRO	1.0000	4.75	.05	20.00
	23.0319		.37	460.64

This sample has been normalized.

* * * DIET COMPOSITION AND COST * * *

INGREDIENT NAME	PERCENT IN DIET	UNIT COST	COST CONTR.	BATCH AMT.
ALFALFA	4.3418	1.75	.08	868.36
CORN SILAGE	22.3326	.60	.13	4466.53
CORN & COBS	67.1484	1.50	1.01	13429.68
UREA	.3821	6.00	.02	76.42
CALCIUM CARBONATE	.2622	1.50	.00	52.44
DEFLOR PHOSPHATE	.3226	5.50	.02	64.53
SALT	.4342	2.00	.01	86.84
FIXED INGREDIENTS	.4342	25.00	.11	86.84
OHPRO	4.3418	4.75	.21	868.36
	100.0000		1.59	20000.00

The second report lists the nutrients in the first column. The second column gives the amount of each nutrient in the sample. This report has not been normalized.

* * * NUTRIENT ANALYSIS * * *

NUTRIENT		AMT. IN DIET
WEIGHT REQUIREMENT		23.03186
NET E PROD MC	MIN	9.11856
TOTAL PROTEIN	MIN	2.07006
DIG. PROTEIN	MIN	1.24111
NPN	MAX	.13943
TOTAL FAT	MIN	.54276
FIBER	MIN	13.06247
CALCIUM	MIN	.08000
PHOSPHORUS	MIN	.06000
AIR DM	MIN	20.05143
FORAGE ADM	MIN	4.16319

This report has been normalized.

* * * NUTRIENT ANALYSIS * * *

NUTRIENT		AMT. IN DIET
WEIGHT REQUIREMENT		100.00000
NET E PROD MC	MIN	39.94457
TOTAL PROTEIN	MIN	9.90096
DIG. PROTEIN	MIN	6.07849
NPN	MAX	.60537
TOTAL FAT	MIN	3.39997
FIBER	MIN	56.75824
CALCIUM	MIN	.34736
PHOSPHORUS	MIN	.26051
AIR DM	MIN	86.83622
FORAGE ADM	MIN	17.85247
SODIUM		.22036
CLORIDE		.36810

One can change to a new data file without leaving and re-entering the Maddy Associates System. This is done by requesting a new file when the computer has completed the reports. The computer will request an identification line (ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.).

ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.

To enter a new file, one should reply new file (NEW FILE) followed by a carriage return.

NEW FILE

If one wishes to obtain reports only on the concentrate part of the feed, one should proceed in the same manner as for a complete diet run until the computer asks for the data file number. Add fifty to the file number. When the computer requests the file number (ENTER DATA FILE NUMBER), one should enter a minus and the file number plus fifty (example -55) followed by a carriage return.

ENTER DATA FILE NUMBER -55

The computer will then ask which of the ingredients are in the concentrate. In this way all of the ingredients may be entered, but the computer will only work with the ingredients listed as part of the concentrate. The computer will ask for the ingredients which are in the concentrate (ENTER CONCENTRATE INGREDIENT # TAPE),

ENTER CONCENTRATE INGREDIENT # TAPE

to which one should list the identification numbers of the concentrate ingredients (example 13). Each entry should be followed by a carriage return.

14
13
15
16
17
-1
6

The last ingredient should be followed by an extra carriage return.

To make sure one has not forgotten to list any ingredients, the computer will ask if there are any more (ANY MORE?)

ANY MORE?

to which one should reply with a carriage return.

The only other difference from the entire diet run is that the reports contain information on the concentrate only. This is the first report from a sample that has not been normalized.

* * * DIET COMPOSITION AND COST * * *

INGREDIENT NAME	PERCENT IN DIET	UNIT COST	COST CONTR.	BATCH AMT.
CORN & COBS	15.4655	1.50	.23	309.31
UREA	.0880	6.00	.01	1.76
CALCIUM CARBONATE	.0604	1.50	.00	1.21
DEFLOR PHOSPHATE	.0743	5.50	.00	1.49
SALT	.1000	2.00	.00	2.00
FIXED INGREDIENTS	.1000	25,00	.02	2.00
OHPRO	1.0000	4.75	.05	20.00
	16.8882		.32	337.76

This is the first report from a sample that has been normalized.

* * * DIET COMPOSITION AND COST * * *

INGREDIENT NAME	PERCENT IN DIET	UNIT COST	COST CONTR.	BATCH AMT.
CORN & COBS	91.5757	1.50	1.37	1831.51
UREA	.5211	6.00	.03	10.42
CALCIUM CARBONATE	.3576	1.50	.01	7.15
DEFLOR PHOSPHATE	.4400	5.50	.02	8.80
SALT	.5921	2.00	.01	11.84
FIXED INGREDIENTS	.5921	25.00	.15	11.84
OHPRO	5.9213	4.75	.28	118.43
	100.0000		1.88	2000.00

This is the second report from a non-normalized sample.

* * * NUTRIENT ANALYSIS * * *

NUTRIENT		AMT. IN DIET
WEIGHT REQUIREMENT		16.88824
NET E PROD MC	MIN	8.33276
TOTAL PROTEIN	MIN	1.80176
DIG. PROTEIN	MIN	1.06925
NPN	MAX	.13943
TOTAL FAT	MIN	.47897
FIBER	MIN	12.45242
CALCIUM	MIN	.06136
PHOSPHORUS	MIN	.05440
AIR DM	MIN	16.78824
FORAGE ADM	MIN	.90000

This is the second report of a normalized sample.

* * * NUTRIENT ANALYSIS * * *

NUTRIENT		AMT. IN DIET
WEIGHT REQUIREMENT		100.00000
NET E PROD MC	MIN	49.34064
TOTAL PROTEIN	MIN	10.66871
DIG. PROTEIN	MIN	6.33130
NPN	MAX	.82560
TOTAL FAT	MIN	2.83609
FIBER	MIN	73.73429
CALCIUM	MIN	.36331
PHOSPHORUS	MIN	.32212
AIR DM	MIN	99.40787
FORAGE ADM	MIN	5.32915
SODIUM		.30138
CHLORODE		.50201

One can end the Nutrient Determination Program when the computer asks for an identification line. If one wishes to end the program, he should reply with a (stop). The computer will ask for identification (ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.)

ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.

to which one should reply stop (STOP) followed by a carriage return.

STOP

Then the computer will reply with a plus (+) to which one should reply with a control G (control letters are not printed by the terminal). This will get one to a point where he can Log Off.

The following is a basic nutrient determination without any modifications.

```
COM-SHARE CENTER A 123
PLEASE LOG IN:A330MON;OHIO
READY, SYSTEM W04
JAN 10  16:14
LAST LOGIN  Jan 8  16:43
-MADDY

PROG:  NUTNET
```

```
MADDY ASSOCIATES, INC. - NUTRIENT DETERMINATION


ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.
CYNTHIA KIDD  1/10/73

ENTER DATA FILE NUMBER  -5
BATCH SIZE = 2000
ENTER COMPOSITION AS INGRED.#, AMOUNT, COST
1,1.,1.75

4,5.14362,.6

6,15.46553,1.5

13,.08801,6.

14,.06039,1.5

15,.07431,5.5

16,.1,2.

17,.1,25.

-1,1.,4.75


SUM OF AMT. ENTRIES =  23.03186   NORMALIZE ? NO
NEW ROWS ? NO
ENTER TITLE OF NEW INGREDIENT  -1
OHPRO
ENTER COMPOSITION AS NUTRIENT #, CONTENT
1,1.

2,.6

3,.41

5,.1

6,.015

7,.08

8,.003

9,.007

10,.9

11,.9

ANY COEFFICIENT CHANGES ? NO
```

OHIO STATE RUMINANT DEMO PROGRAM 12/71
CYNTHIA KIDD 1/10/73

JAN 10

* * * DIET COMPOSITION AND COST * * *

INGREDIENT NAME	PERCENT IN DIET	UNIT COST	COST CONTR.	BATCH AMT.
ALFALFA	1.0000	1.75	.02	20.00
CORN SILAGE	5.1436	.60	.03	102.87
CORN & COBS	15.4655	1.50	.23	309.31
UREA	.0880	6.00	.01	1.76
CALCIUM CARBONATE	.0604	1.50	.00	1.21
DEFLOR PHOSPHATE	.0743	5.50	.00	1.49
SALT	.1000	2.00	.00	2.00
FIXED INGREDIENTS	.1000	25.00	.02	2.00
OHPRO	1.0000	4.75	.05	20.00
	23.0319		.37	460.64

* * * NUTRIENT ANALYSIS * * *

NUTRIENT		AMT. IN DIET
WEIGHT REQUIREMENT		23.03186
NET E PROD MC	MIN	9.11856
TOTAL PROTEIN	MIN	2.07006
DIG. PROTEIN	MIN	1.24111
NPN	MAX	.13943
TOTAL FAT	MIN	.54276
FIBER	MIN	13.06247
CALCIUM	MIN	.08000
PHOSPHORUS	MIN	.06000
AIR DM	MIN	20.05143
FORAGE ADM	MIN	4.16319

```
ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.
NEW FILE


ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.
CYNTHIA KIDD CONC.

ENTER DATA FILE NUMBER  -55

ENTER CONCENTRATE INGREDIENT # TAPE
14
13
15
16
17
-1
6


ANY MORE ?

BATCH SIZE = 2000
ENTER COMPOSITION AS INGRED.#, AMOUNT, COST
1,1.,1.75

4,5.14362,.6

6,15.46553,1.5

13,.08801,6.

14,.06039,1.5

15,.07431,5.5

16,.1,2.

17,.1,25.

-1,1.,4.75


SUM OF AMT. ENTRIES =   16.88824   NORMALIZE ? NO
NEW ROWS ? NO
ENTER TITLE OF NEW INGREDIENT  -1
OHPRO
ENTER COMPOSITION AS NUTRIENT #, CONTENT
1,1.

2,.6

3,.41
```

5,.1

6,.015

7,.08

8,.003

9,.007

10,.9

11,.9

ANY COEFFICIENT CHANGES ? NO

OHIO STATE RUMINANT DEMO PROGRAM 12/71
CYNTHIA KIDD CONC.

JAN 10

* * * DIET COMPOSITION AND COST * * *

INGREDIENT NAME	PERCENT IN DIET	UNIT COST	COST CONTR.	BATCH AMT.
CORN & COBS	15.4655	1.50	.23	309.31
UREA	.0880	6.00	.01	1.76
CALCIUM CARBONATE	.0604	1.50	.00	1.21
DEFLOR PHOSPHATE	.0743	5.50	.00	1.49
SALT	.1000	2.00	.00	2.00
FIXED INGREDIENTS	.1000	25.00	.02	2.00
OHPRO	1.0000	4.75	.05	20.00
	16.8882		.32	337.76

* * * NUTRIENT ANALYSIS * * *

NUTRIENT		AMT. IN DIET
WEIGHT REQUIREMENT		16.88824
NET E PROD MC	MIN	8.33276
TOTAL PROTEIN	MIN	1.80176
DIG. PROTEIN	MIN	1.06925
NPN	MAX	.13943
TOTAL FAT	MIN	.47897
FIBER	MIN	12.45242
CALCIUM	MIN	.06136
PHOSPHORUS	MIN	.05440
AIR DM	MIN	16.78824
FORAGE ADM	MIN	.90000

```
ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.
 STOP

+

PROG: END

-LOG
USAGE
CCU:    060
CLT:    0.53  HOURS
THANK YOU
```

The following is a basic nutrient determination with the modifications made.

```
COM-SHARE CENTER A 123
PLEASE LOG IN:A330MON;OHIO
READY, SYSTEM WO4
 JAN 10  17:00
LAST LOGIN  JAN 10  16:40
-MADDY

PROG:  NUTDET
```

```
MADDY ASSOCIATES, INC. - NUTRIENT DETERMINATION


ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.
CYNTHIA KIDD  1/10/73 MOD.

ENTER DATA FILE NUMBER  -5
BATCH SIZE = 20000
ENTER COMPOSITION AS INGRED.#, AMOUNT, COST
1,1.,1.75

4,5.14362,.6

6,15.46553,1.5

13,.08801,6.

14,.06039,1.5

15,.07431,5.5

16,.1,2.

17,.1,25.

-1,1.,4.75


SUM OF AMT. ENTRIES =  23.03186  NORMALIZE ? YES
NEW ROWS ? YES
NAME OF NUTRIENT
SODIUM  ENT
ENTER COMPOSITION AS INGRED.#, CONTENT FOR ROW  12
1,.00000

4,.00000

6,.000005

13,.00000

14,.00000

15,.00000

16,.3934

17,.00000

-1,.01148
```

```
ENTER NAME OF NUTRIENT
CHLORIDE

ENTER COMPOSITION AS INGRED.#, CONTENT  FOR ROW  13
1,.00000

4,.00000

6,.0001

13,.00000

14,.00000

15,.00000

16,.6066

17,.00000

-1,.0218

ENTER NAME OF NUTRIENT
COMPOSITION AS NUTRIENT #,

13,.00000

14,.00000

15,.00000

16,.6066

17,.00000

-1,.0218

ENTER NAME OF NUTRIENT

ENTER TITLE OF NEW INGREDIENT  -1
OHPRO

ENTER COMPOSITION AS NUTRIENT #, CONTENT
1,1.

2,.6

3,.41
```

5,.1

6,.015

7,.08

8,.003

9,.007

10,.9

11,.9

ROWS ADDED WERE:
12 SODIUM
13 CHLORIDE

ANY COEFFICIENT CHANGES ? YES
ENTER CHANGE AS INGRED.#, NUTR.#, NEW VALUE
1,1,1.

1,2,.25

1,4,.125

1,6,.0275

1,7,.26

1,8,.0135

1,9,.002

1,10,1.

1,11,1.

4,1,1.

4,2,.12

4,3,.06

4,4,.04

4,6,.009

4,7,.07

4,8,.001

4,9,.0007

4,10,.43

4,11,.43

OHIO STATE RUMINANT DEMO PROGRAM 12/71
CYNTHIA KIDD 1/10/73 MOD.

JAN 10

* * * DIET COMPOSITION AND COST * * *

INGREDIENT NAME	PERCENT IN DIET	UNIT COST	COST CONTR.	BATCH AMT.
ALFALFA	4.3418	1.75	.08	868.36
CORN SILAGE	22.3326	.60	.13	4466.53
CORN & COBS	67.1484	1.50	1.01	13429.68
UREA	.3821	6.00	.02	76.42
CALCIUM CARBONATE	.2622	1.50	.00	52.44
DEFLOR PHOSPHATE	.3226	5.50	.02	64.53
SALT	.4342	2.00	.01	86.84
FIXED INGREDIENTS	.4342	25.00	.11	86.84
OHPRO	4.3418	4.75	.21	868.36
	100.0000		1.59	20000.00

* * * NUTRIENT ANALYSIS * * *

NUTRIENT		AMT. IN DIET
WEIGHT REQUIREMENT		100.00000
NET E PROD MC	MIN	39.94467
TOTAL PROTEIN	MIN	9.90096
DIG. PROTEIN	MIN	6.07849
NPN	MAX	.60537
TOTAL FAT	MIN	2.39997
FIBER	MIN	56.75824
CALCIUM	MIN	.34735
PHOSPHORUS	MIN	.26051
AIR DM	MIN	86.83622
FORAGE ADM	MIN	17.85247
SODIUM		.22099
CHLORIDE		.36810

```
ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.
NEW FILE


ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.
CYNTHIA KIDD CONC. MOD.

ENTER DATA FILE NUMBER  -55

ENTER CONCENTRATE INGREDIENT # TAPE
13
14
15
16
17
-1

ANY MORE ?

BATCH SIZE = 2000
ENTER COMPOSITION AS INGRED.#, AMOUNT, COST
1,1.,1.75

4,5.14362,.6

6,15.46553,1.5

13,.08801,6.

14,.06039,1.5

15,.07431,5.5

16,.1,2.

17,.1,25.

-1,1.,4.75


SUM OF AMT. ENTRIES =   1.42271   NORMALIZE ? YES
NEW ROWS ? YES
ENTER NAME OF NUTRIENT
SODIUM
ENTER COMPOSITION AS INGRED.#, CONTENT  FOR ROW  12
1,.00000

4,.00000

6,.000005

13,.00000

14,.00000

15,.00000
```

```
16,.3934

17,.00000

-1,.01148

ENTER NAME OF NUTRIENT
CHLORIDE
ENTER COMPOSITION AS INGRED.#, CONTENT  FOR ROW  13
1,.00000

4,.00000

6,.00015

13,.00000

14,.00000

15,.00000

16,.6066

17,.00000

-1,.0218

ENTER NAME OF NUTRIENT

ENTER TITLE OF NEW INGREDIENT  -1
OHPRO
ENTER COMPOSITION AS NUTRIENT #, CONTENT
1,1.

2,.6

3,.41

5,.1

6,.015

7,.08

8,.003

9,.007

10,.9

11,.9


ROWS ADDED WERE:
   12     SODIUM
   13     CHLORIDE
ANY COEFFICIENT CHANGES?  NO
```

OHIO STATE RUMINANT DEMO PROGRAM 12/71
CYNTHIA KIDD CONC. MOD.

JAN 10

* * * DIET COMPOSITION AND COST * * *

INGREDIENT NAME	PERCENT IN DIET	UNIT COST	COST CONTR.	BATCH AMT.
UREA	6.1861	6.00	.37	123.72
CALCIUM CARBONATE	4.2447	1.50	.06	84.89
DEFLOR PHOSPHATE	5.2231	5.50	.29	104.46
SALT	7.0288	2.00	.14	140.58
FIXED INGREDIENTS	7.0288	25.00	1.76	140.58
OHPRO	70.2884	4.75	3.34	1405.77
	100.0000		5.96	2000.00

* * * NUTRIENT ANALYSIS * * *

NUTRIENT		AMT. IN DIET
WEIGHT REQUIREMENT		100.00000
NET E PROD MC	MIN	42.17304
TOTAL PROTEIN	MIN	46.20113
DIG. PROTEIN	MIN	16.45498
NPN	MAX	9.80020
TOTAL FAT	MIN	1.05433
FIBER	MIN	5.62307
CALCIUM	MIN	3.44303
PHOSPHORUS	MIN	1.43218
AIR DM	MIN	92.97116
FORAGE ADM	MIN	63.25955
SODIUM		3.57206
CHLORIDE		5.79598

```
ENTER IDENTIFICATION LINE - 48 CHARACTERS MAX.
STOP

*STOP*

+

PROG:  END

-LOG
USAGE
CCU:     031
CLT:     0.26  HOURS
THANK YOU
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